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COMPLETENESS OF REVASCULARIZATION AND LONG-TERM MORTALITY FOLLOWING STENTING IN THE DRUG-ELUTING STENT ERA

i2 Poster Contributions
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Background: The impact of incomplete revascularization on long-term mortality following stenting for multivessel disease has not been thoroughly studied using population-based real-world data in the drug-eluting stent (DES) era. In one of our earlier studies, we found that incomplete revascularization was related to higher risk of mortality in 18-month follow-up after stenting in the DES era. In this study, we examined the impact of incomplete revascularization on long-term (5-year) mortality following stenting for multivessel disease.

Methods: The New York State's Percutaneous Coronary Intervention Reporting System was used to identify 21,767 patients with multivessel disease who underwent stenting procedures between October 1, 2003 and December 31, 2005. The National Death Index was used to ascertain the vital status of these patients until the end of 2007. The patients with incomplete revascularization were propensity-matched to those with complete revascularization using on a 1:1 ratio based on the probability of receiving incomplete revascularization. The impact of incomplete revascularization on long-term survival was examined using Kaplan-Meier survival analysis and Cox proportional hazards regression modeling.

Results: Among 21,767 patients, 84.4% received DES only, 8.3% received bare-metal stents (BMS) only, and 7.3% received both DES and BMS. A total of 6,844 (31.4%) were completely revascularized, and 14,923 (68.6%) were incompletely revascularized. Propensity matching resulted in 6,511 pairs of patients. In the matched patients, the respective 5-year survival rates were 81.4% and 79.3% for complete and incomplete revascularization ($P<0.004$). In comparison to complete revascularization, the risk of death was 13% higher for incomplete revascularization (hazard ratio = 1.13, 95% confidence interval: 1.02 to 1.26, $P<0.02$).

Conclusion: In the drug-eluting stent era, incomplete revascularization is associated with increased risk of long-term mortality following stenting for multivessel disease.